

WHAT IS CLAIMED IS:

1. A data communication system comprising:
a source node for transferring object data
including one or more segments by using at least one
asynchronous communication;
one or more destination nodes for receiving the
object data transferred from said source node; and
a controller for setting a logical connection
relationship between said source node and said one or
more destination nodes, wherein said controller selects
a communication protocol to be used in said source node
and said destination nodes among a plurality of
~~different communication protocols.~~

15 2. A data communication system according to claim
1, wherein said communication protocol includes a
communication protocol for transferring the data by
using broadcast communication.

20 3. A data communication system according to claim
2, wherein said communication protocol is a
communication protocol capable of effecting multicast
communication.

25 4. A data communication system according to claim
2, wherein said communication protocol is a
communication protocol using asynchronous broadcast

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5. A data communication system according to claim 1, wherein said communication protocol includes a communication protocol for transferring the object data by using a communication method for identifying a communication partner.

6. A data communication system according to claim 5, wherein said communication protocol is a communication protocol capable of effecting unicast communication.

7. A data communication system according to claim 5, wherein said communication protocol is a communication protocol using asynchronous write transaction.

8. A data communication system according to claim 1, wherein each of said source node and said destination node includes a register space in which communication ability of said node is written.

9. A data communication system according to claim 8, wherein said controller selects said communication protocol on the basis of a content of said register spaces.

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10. A data communication system according to claim 1, wherein each of said source node and said destination node includes a register space in which information regarding the logical connection
5 relationship is written.

11. A data communication system according to claim 1, wherein said controller selects said communication protocol whenever the logical connection
10 relationship is set.

12. A data communication system according to claim 1, wherein said source node successively transfers data corresponding to one segment by using at
15 least one asynchronous communication.

13. A data communication system according to claim 1, wherein each of said one or more destination node returns response to the transferred data by using
20 the asynchronous communication.

14. A data communication system according to claim 1, wherein said controller can set one or more logical connection relationship between said source
25 node and said one or more destination nodes.

15. A data communication system according to

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claim 1, wherein said source node writes the object data by using address for commonly designating memory spaces of said one or more destination nodes.

5 16. A data communication system according to claim 1, wherein the asynchronous transferring is based upon an asynchronous transferring method defined in ~~IEEE 1394-1995 Standard.~~

10 17. A data communication system according to claim 1, wherein the communication system is a bus-type network.

15 18. A data communication system according to claim 1, wherein the data communication system is a network based upon IEEE 1394-1995 Standard.

20 19. A data communication system according to claim 1, wherein the object data is at least one of still image data, graphic data, text data, file data and program data.

20. A data communication method comprising the steps of:

 setting a logical connection relationship between a source node and one or more destination nodes;

 selecting a communication protocol to be used in

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receiving the object data transferred from said source node by using the logical connection relationship.

22. A data communication method comprising the steps of:

23. A data communication apparatus comprising:

means for receiving at least one communication packet transferred in an asynchronous manner, by using a logical connection relationship set with respect to one or more destination nodes; and

5 means for writing data included in said communication packet into a memory space designated by said communication packet.

10 24. A data communication method comprising the steps of:

receiving at least one communication packet transferred in an asynchronous manner, by using a logical connection relationship set with respect to one or more destination nodes; and

15 writing data included in said communication packet into a memory space designated by said communication packet.

20 25. A data communication apparatus comprising:

means for setting a logical connection relationship between a source node and one or more destination nodes; and

25 means for selecting a communication protocol capable of being used in the logical connection relationship among a plurality of different communication protocols.

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26. A data communication method comprising the steps of:

setting a logical connection relationship between a source node and one or more destination nodes; and

5 selecting a communication protocol capable of being used in the logical connection relationship among a plurality of different communication protocols.

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